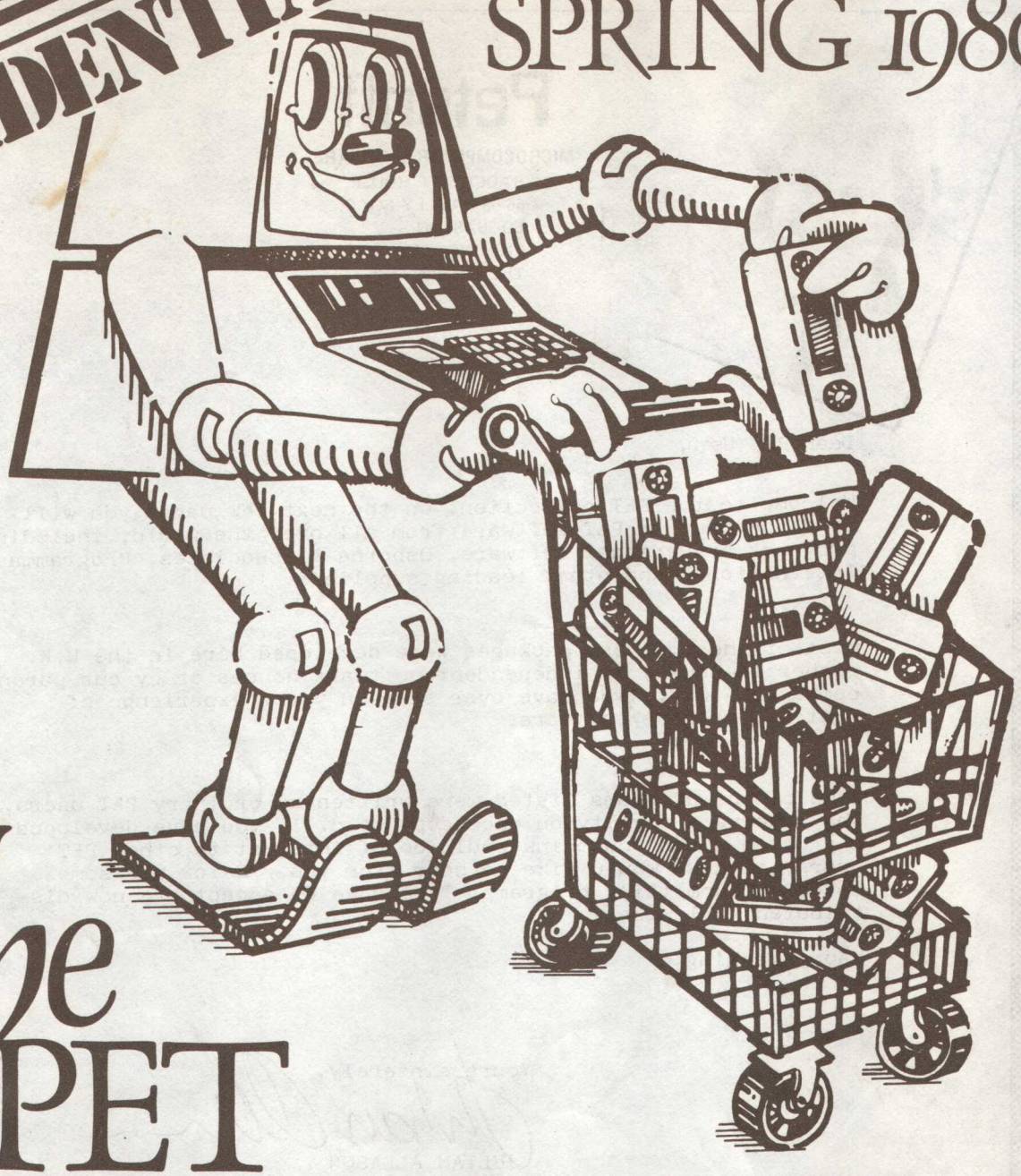
CONFIDENTIAL

SPRING 1980



The PET COLLECTION

by

ACT Petsoft

The professional Pet Software Specialists

Petsoft

MICROCOMPUTER SOFTWARE

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Dear PET User,

Welcome to the PET collection. On the next few pages you will find the best in PET software from all over the world, including programs by Personal Software, Osborne & Associates, Programma International and other leading suppliers.

Most of the business packages were developed here in the U.K. either in-house, by independent software houses or by our parent company, A.C.T., who have over sixteen years experience of writing business software.

Some of the programs listed were written by ordinary PET users, who receive a royalty on each copy sold. If you have developed a program which you think could be of interest to other PET users, then we would like to hear from you. Below are some notes on submitting programs. Titles we do accept are now distributed worldwide.

Happy hacking,

Yours sincerely,

JULIAN ALLASON

Part of the ACT *Computer Group*

Notes on submitting programs

We welcome programs submitted for inclusion in our next catalogue and for distribution worldwide. Before sending programs in, please bear these points in mind:

1. Programs should be on cassette or disk and recorded at least twice.
2. Be sure to identify the program title, version number, author's name and address in REMark statements.
3. Please identify in REMs whether your PET has the original or revised ROM set. Ideally programs should be compatible with both.
4. Incorporate instructions and prompts within the program. If short of space, precede the main program with an instruction routine. Send as much written documentation as possible including a description of what the program actually does.
5. Incorporate error trapping routines where possible. Not every PET user is a programmer.
6. Write the program name and your name and address on the cassette label.

Programs are normally assessed by a panel of several different experts. Please therefore allow six weeks for the review procedure.

Business Programs

"The programs listed below cover a wide variety of standard business applications. However, the individual needs of customers do vary and some 'tailoring' may be required in certain cases."

ACCOUNTS £12 This program enables a continual updating of accounts associated with orders placed and allows for invoicing against any order at any time. If a single order for a number of different items results in part invoicing on different dates the program up-dates automatically to give invoice total to date for that order. Whenever an invoice is received against an order PET will immediately respond with the original estimated cost of the order and the current up-dated invoice total.
As supplied the program will handle up to 100 different orders, will allow for up to 20 'fund sources' and also permit up to 100 departments to place orders against any of the fund sources available. As invoices are received any over or under estimating on the original is allowed for in arriving at the committed total for each account area.
During each run a data tape is produced: for the second and following runs, the previous latest data tape is read in before any new data is typed in at the keyboard.

ADDRESSBOOK 4 £6 Stores names, addresses and telephone numbers as files in RAM, giving split second access to the information you need. Easy to adapt and well-formatted. Files are easily updated. Additional memory may be required for use with mailing lists or large addressbooks as data is accessed from RAM.

ADDRESSFILE £4 Names, addresses and telephone numbers are stored sequentially on a data tape as files, and read back off the tape as required. Much slower than the RAM access of 'Addressbook', but effectively without memory limitation. Improved disk version £8.

BANK BALANCE £6 Personal cash flow program predicts your forward day to day bank balance allowing for payments expected (eg salary), cheques issued and delay in clearance. Displays a forward list of anticipated closing daily balances and warns you when you will go in the red.

CMC WORD PROCESSOR £25 The ultimate word processor for the PET. Script directives include line length, left margin, centering and skip. Edit commands allow the user to insert lines, delete lines, move lines, change strings, save onto cassette, load from cassette, move up , move down, print and type. Comprehensive instruction booklet included. Works with your existing printer interface. (Disk version £28.50).

CRITICAL PATH £15 A program to perform a standard critical path analysis on data stored in program data statements. Output consists of earliest and latest start times for the events and the float time on both activities and events. Instructions for data entry and an example are included in the program. The maximum size network handled is 80 events and 160 activities; dummy activities are also handled.

See 'JOB EVALUATION' on Page 7

DEBTORS LETTERS £12 Tests the age of invoices and automatically prints out one of three "chaser" letters of increasing severity, customised with full account details. An effective means of improving your cash flow. Full instructions within the program.

DISCOUNTED CASHFLOW £8 Assuming a given interest rate, the "Net Present Value" method sums the present values of the future cashflows and adds the result to an initial investment (if any).

ESTATE AGENTS Pack £25 Asks your clients for the size, type, locations, price range etc. of the house they are seeking and prints or displays particulars of suitable properties. State whether printing or screen version required.

FORECAST £10 A powerful and flexible program for businessmen and students. Computes the logarithmic mean growth rate of a set of figures (eg Sales) and forecasts the future trend in the form of a histogram. Accepts up to 35 values of established Daily, Weekly, Monthly or Yearly figures. These are plotted as a histogram and a forecast is then made based on the logarithmic mean growth. A new histogram is then plotted showing the forecast values.

FRAMEPACK £50 Structural analysis in 8K. This program deals with small frame analysis problems such as continuous beams or portal frames, with many forms of loading, including settlement. A useful tool for quick calculations solving structures with up to 5 nodes and 9 members. Output consists of a drawing of the programme on the PET screen along with a complete list of nodal displacements and member forces. On-screen editing allows rapid modification of data. Complete documentation provided.

INVOICING £20 Provides order entry on formatted screen, validation, pricing, amendment or deletion. Handles discounts and features invoice display on screen with sequential numbering in th print routine, separate VAT rates allowed for each product. At least 50 product lines can be handled on the 8K PET; up to 225 with additional memory. Automatic truncation of item descriptions on screen but full print on invoice. Sundry charges can also be included on an invoice.

HOTEL DATABASE £5 First in a series of computerised travel guides, this program asks for the area in which you need a hotel, lets you choose the type of hotel — City centre, Holiday, Country house, Inn etc. — before searching out the one most suited to your requirements. All information is carefully researched and up-todate. Covers England, Wales and Scotland, including many little-known but delightfully situated hotels for both business and holiday travel.

HOUSEFINDER £25 Professional package developed specially for Estate Agents. Details of properties on the register are encoded under Area (up to 34 are handled), type of house, situation, No. of reception rooms, bedrooms, garden size etc. Modes include Enter or Display Details, Find Property, Save Files, Load Files, etc.

MAILING LIST £15 A well written utility provides the structure for mailing and labelling applications. (Disk version £15.)

MICRO TEXT EDITOR £15 A line oriented text editor, using cassette files (complete with patches) which allows insertion, deletion and modification of upper- and lower-case alphabetic and numeric strings through the use of the cursor control keys. Supplied for use in office filing applications or as the front end of a word processor. Supplied with a comprehensive illustrated manual, which is available separately, price £3 post free, refundable on order.

PAYROLL £25 A package containing four programs written with the small businessman in mind, the main aim being to provide him with an easy method of pay computation and ready access to month-end and year-end data for Inland Revenue purposes. Payroll is computed up to gross and down to nett, and the employee wage slip is displayed; also employees details, with details to date. Gives weekly summary, coin analysis, monthly summary and year-end details. Update service available. Cassette system.

PAYROLL—200 (Disk) £50. A totally new and complete disk based payroll system designed and written to meet the needs of small businesses. Up to 200 employees per disk are catered for. A 32K PET 2001-32 equipped with Commodore or Petsoft (Compu/Think) dual floppy, an Annadex DP800 or device 4 printer is required.
Ease of use, security and versatility are key points in this system. Facilities provided include Holiday Pay, Sick Pay, Bonus payments and two rates of overtime, as well as allowing a "standard week" to be specified for each employee. Weekly and monthly summaries are provided and amendments necessary because of a Budget (e.g. increasing employee's tax codes) are made very easy. Each week a wage slip is printed for each employee followed by an analysis of the coins/notes required for these employees paid in cash (payments by cheque and credit transfer are also allowed for). Tax and N.I. are computed automatically from a knowledge of the tax code and N.I. rate applicable to that employee. All tax codes and N.I. tables A, B and C are catered for. As well as being simple and time saving to use, the system is designed to be "operator proof" and the security prevents unauthorised amendment of details on file. Versions of this system for other printers will be available shortly. Update service available.

PORTFOLIO £8 Well written Investment Reporting program. Request current price, compares with purchase prices, prepares valuations; Analyses Net Income by security and by months. May be easily adapted.

PROFIT & LOSS £12 Takes into account all stocks, stocks sold, returns, stock in manufacture, direct expenditure, e.g. salaries, expenses etc. Totals expenditure, gross and net items and net profits/losses.

PERCENTAGE COSTING £25 A powerful method of handling cost information, enabling you to input, review, sort, save and display data quickly and efficiently. Up to 100 cost factors, grand total, constituent percentages and sensitivity information are displayed in page of ten factors up to £9m with pence. Percentage rounding to two decimal places facilitates study of percentage changes in total due to individual changes. Novel machine code Highlight feature ensures easy reading and selective disabling of keys making the system virtually foolproof. Instructions included, or available separately £1 post free, refundable on order.

PORTFOLIO MANAGEMENT £9 Carries out sorting, comparison and display of actions required on a list of shares to be monitored, and a list of holdings each specifying a 'Stop Loss', 'Alert' and 'Take Profit' point for each share. Separate routines also enable the user to call up a list of clients holding a chosen share or a list of all shares held by a chosen client. Program contains sample share data for demonstration. Full instructions.

RESTAURANT FINDER £5 Another set of carefully researched information for restaurant users. Written by the same authors as the popular Hotel Database. The program displays a map of the U.K. broken up into seventeen areas. The user selects the area in which he is looking for a restaurant and then chooses the type of restaurant that he has in mind, and which suits his pocket. PET then searches the database and selects the most suitable establishment. A brief description of the restaurant is given.

SALES ANALYSIS 3 £10 A more powerful version of one of our most popular programs. Handles up to ten salesmen, up to four separate departments, over twelve months, and prints bar charts for analysis of their sales figures. Minimum plot value is £1,000 on a scale to £32,000. Maximum plot value of £511,000/month/salesman/department. These parameters can easily be changed. Includes instructions. Send an SAE for free data sheet. "Time-saving, easy to follow and simply efficient. At £10 the program is certainly worthwhile for what it will do."—Practical Computing.

STANDARD LETTERWRITER £10 Enables a PET and printer to type multiple standard letters with individually personalized headings. The text is held in Print statements with the Names and Addresses stored in DATA lines. String manipulation converts names and titles for "Dear . . ." heading. Demonstration, Documentation and full instructions. Handles one of the most popular Word Processing Applications at a fraction of the normal cost. 8K PET holds letter plus approx. 50 names and addresses at once.

STOCKBROKER £20 The program is intended both for Private and Institutional investors in Stocks and Shares and for Stockholders. It has 3 routines:
1) Generating Contract Notes for Purchase and Sales of shares, completely itemised, rounded, and set out ready for typing, or for checking existing Contract Notes.
2) Share Price Watching. This routine accepts inputs of number and price of shares purchased and their names, a chosen 'Stop Loss' percentage and 3 different Profit percentages, and then displays the Selling Price required to achieve Break-even, Stop-loss, and the 3 chosen levels of Profits, all figures being **Net** of all buying and selling expenses, i.e. they are Real profits or losses instead of rough ones based on share prices only.
3) Yield calculations. Given a dividend or interest rate, a purchase price and a Nominal or Face Value for each security, this routine computes the resulting percentage Yield on your investment.

Documentation available separately price £1 post free, refundable on order.

STOCK CONTROL ON CASSETTE £12 A more powerful version of our standard package, written so as to provide a basic framework to which users can add any further facilities that may be required. Data is stored under Stock Number, Description, Suppliers Name and Address, Number in Stock. Handles up to 150 Stock items per tape file.

STOCK CONTROL ON DISK £50 Facilities allow full operational stock printout, total costing of all items in stock and stock re-order lists. Data is stored under Stock Number, Description, Stock Code, VAT Rates, Quantity on Order, Quantity in Stock, Unit of Quantity, Designation, Minimum Level, Allocated Stock, Sale Price, Purchase Price, Allocation, Stock Group, Sales for Three Periods and Receipts for one Period. Access time approx 2 seconds. Max 2500 stock items per disk, 1000 suppliers. (Petsoft/CompuThink Disk). Commodore Disk version also available.

TRIMLOSS £15 Displays table of optimum arrangements for cutting a series of different orders from given stock lengths (e.g. steel, carpet etc.) to arrive at minimum wastage. An effective, well documented tool.

INVOICING/STOCK CONTROL ON DISK £75

This comprehensive integrated system is available on CompuThink disk drives and 32K PET. It allows for the maintenance of the inventory as well as producing sales invoices on ACT's pre-printed stationery. Four management reports may be produced and 21 fields are held for each of the 2400 stock items – Description, In Stock Quantity, On Order Quantity, Allocated Stock Quantity, Minimum Stock Level, Maximum Stock Level, Unit of Quantity Designated, Unit Type, Re-order Period, Cost, Unit Sale Price, Predicted Free Stock Quantity, Free Stock Quantity, Accounting Code, Allocation, Supply Code, Opening Stock Quantity, Receipts for current period and Sales for three periods.

Programming Aids and Tutorials

ALPHASORT £4 Useful routine swiftly sorts up to 100 words — e.g. names with initials — into ascending or descending alphabetical order. Useful as a subroutine. Adaptable for different printers. Tests all letters in a word during sort.

ARTIST £4 Powerful aid greatly speeds and simplifies screen composition of diagrams etc. Graphic symbols are displayed and direction set by pressing single keys. Any key held down will be repeated. Special features allow shapes to be reversed, or even the whole picture, grid reference

6502 ASSEMBLER IN BASIC £25 Now you can write program in assembly language for the 6502 microprocessor and have them translated to machine language for direct execution on your PET. The assembler accepts all standard 6502 instruction mnemonics, pseudo-ops and addressing modes plus a new TEXT pseudo-op, and evaluates binary, octal, decimal, hexadecimal and character constants, symbols and expressions. You can create assembly source programs with the text editor which is supplied, and save them on cassette. The assembler reads its source code from cassette or from DATA statements and assembles machine code directly at any location in memory. You can save machine language subroutines in the PET's second cassette buffer, and execute them immediately with keyboard and display input/output.
The Assembler cassette includes a sample assembly language source program and comes with a 30 page manual which includes a number of PET machine language programming hints. To use the assembler, you should be familiar with the 6502 microprocessor instruction set and with assembly language programming in general. Four programs are included on the cassette.
Free Data sheet sent on receipt of SAE. The manual is available separately price £2 post free, refundable on order. (Disk version £30).

AUTOGRAPH £7 Plots the graph of an algebraic function with one unknown determining correct scale, properly spacing and labelling the axes; will replot with different max and min. Second and third harmonics of varying percentage and phase displacement can be shown. One of our best selling programs.

BUTTERFIELD'S ENCYCLOPAEDIA £12 A treasure trove of over thirty utilities and games from the PET's leading exponent, Jim Butterfield. Includes Copycat, Tape Test, Morse Practice, Triangle, Calculator, Metric Conversion, Data Finder, Trendline, Mileage, Factors, Keyboard Record, Battleships, and many more. Outstanding value.

CASSETTE FILING 2 £8 Comprehensive and well written tutorial in three programs, demonstrates the correct use of data files on the PET. Gives all the patches necessary for successful file handling. Includes a special program which thoroughly tests the File operating system on your PET. We think every PET owner should have a copy of this package.

DATA FILE HANDLER £12 Essential program structure provides routines for handling data files on one or two cassettes. Each file may comprise up to 9 volumes (sides of tape), and either cassette unit may be designated to read or write or to be out of use. Documentation included. Good housekeeping for your own PET programs.

DIAGNOSTIC £8 Is your PET suffering from a faulty RAM? Basic & Binary mixed program tests all locations with all possible information and displays location of fault. Conducts 1,628,416 individual tests on a standard PET!

DEBUG £20 is an essential development tool for the assembler level programmer. It provides a total of 19 commands, including break points which can alter memory location, perform single and multi-step executions and perform in-line assembly and disassembly.

DIRECT ASSEMBLER £30 An assembler written in machine code which enters machine code directly into memory from an address defined by the user. 6502 mnemonics are translated into the appropriate code by the assembler. The address and code for each instruction is displayed as it is entered. A disassembler, execute and cassette routines are included in order to test, save and load machine code programs. The whole assembler with its associated routines occupies about 3K bytes of memory.

DISK MERGE £20 *(CBM Disk)* An efficient merge program that acts as an automatic program builder by concatenating previously recorded routines. A library of such routines can easily be built up by simply recording programs as data files. Named routines are automatically concatenated line-by-line; when finished, the Merge routine deletes itself.

DISASSEMBLER £12 A short machine code routine which bypasses the PEEK-protect, is stored in the free cassette buffer. A starting address in decimal or hex is requested. The program then disassembles the machine code at the address given. 16 (decimal) lines will be output, with the option to examine further sequential locations. Instructions included.

6502 FORTH £30 FORTH is a unique threaded language that is ideally suited for systems and applications programming on a PET. The user may have the interactive FORTH Compiler/Interpreter system running stand-alone in 8K to 12K bytes of RAM. The system also offers a built-in incremental assembler and text editor. Since the FORTH language is vocabulary based, the user may tailor the system to resemble the needs and structure of any specific application. Programming in FORTH consists of defining new words, which draw upon the existing vocabulary, and which in turn may be used to define even more complex application. Reverse Polish Notation and LIFO stacks are used in the FORTH system to process arithmetic expressions. Programs written in FORTH are compact and very fast. System features and facilities include Standard Vocabulary with 200 words, Incremental Assembler, Structured Programming Constructs, Text Editor, Block I/O Buffers, Cassette Based System, User Defined Stacks, Variable Length Stacks, User Defined Dictionary, Logical Dictionary Limit, Error Detection and Buffered Input.
(Old ROMs only.)

FORMAT £8 How to avoid all those infuriating decimal places PET prints when giving numerical results. Three-program tutorial includes a working demonstration of the routine in action, and the subroutine itself, ready for incorporation in your own program; occupies just over 500 bytes. Will control the number of digits required and decimalize.

FORMATTED LISTER £15. Intelligible listings at last! Produces neat listings of Basic programs, which differ from the normal one in that the line numbers are right aligned, the listing is divided into numbered titled pages, and Basic lines too long to fit in the print width have their continuations indented clear of the line numbers. PET cursor control characters are printed as bracketed abbreviations e.g. (CLR) for "Clear Screen". For printers without lower case, shifted PET symbols are printed as bracketed upper case symbols. A blank line is printed as each line started with a REM statement. This allows separation of program line blocks.

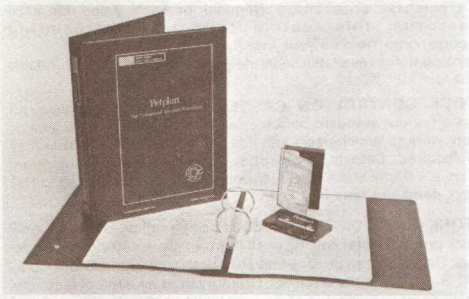
GRAPHICS PACKAGE £12 This set of three programs provides a quick and easy way to use your PET for several of the most common graphics applications: drawing pictures, plotting equations and data.

DOODLER can be used to very quickly create pictures, charts and plots consisting of horizontal, vertical or diagonal lines, or curves.

PLOTTER plots equations or data on a 80 by 50 grid with automatic scaling or labelling of the axes. Any function, subroutine or data array which can be represented in Basic can be plotted. You specify the function and the range for the independent variable, and the program does the rest.

BARPLOT is similar in its purpose to Plotter but is designed to create bar graphs. You specify the values — up to nine bars can be handled — and the program automatically spaces out the bars and adjusts the vertical scale. (Improved disk version £20).

"PETPLAN" Business simulation £60 32K PET



Petplan is a general management business simulation game exciting to play. You make decisions each period about a product called Petal. You have to manufacture it, hire workers and buy machines. You invest in plant and premises. You must advertise and set the right selling price. Your company is quoted on the Stock Exchange and you will want to increase the share price by making good profits.

What you learn

You see how a company grows, how cash flows through the business, how wrong decisions can lead to bankruptcy. You learn to plan resources, control cash flow and build up profits and assets.

Roles you play

You can be sales manager, or manage production, or be financial controller. You can play all these roles in one, or team up with your friends as a board of directors.

Planning, budgetting & beating targets

Forms have been specially designed to enable your company to make long term plans, set targets and then challenge yourself to beat them.

Probes

To assist your decisions you can probe different combinations of labour with machines and selling prices with advertising.

Screen Reports

These show decisions, key results, a full set of accounts with balance sheet and cash and resource budgets.

Print Option

You may print out any of the screen reports if you wish to keep a record of your play.

Manual

A comprehensive manual comes with Petplan and includes a specimen run and a range of budget and accounting forms.

Voice Guide

The reverse side of the tape is a voice guide that takes you step by step through the simulation.

Businessmen

Pinpoints the effects of decisions on liquidity, profits and long term growth.

Business Students

Invaluable for learning accountancy, economics and business finance.

Managers

Great stress is laid on planning objectives.

Industrial Trainers

Will support your management development programmes, especially in finance, marketing and decision-making.

Colleges, Polytechnics & Universities

Provides practical-type experience for courses such as HND, Diploma in Management Studies, Degree and Masters courses in Business Studies, in Finance and in Economics.

. . . A suite of powerful business programs at a budget price – from ACT Petsoft, the professional software specialists!

ACT SALES LEDGER £120

Commodore Disk £95 Cassette version

Full facilities for the maintenance of the Sales Ledger, the preparation of a list of outstanding balances and printing of statements. All data including new customer details, invoices, credits, cash and transfers are entered under step by step guidance on the display screen. Printed results include Audit List, Aged Debtors List, Control Account and Statement.

For 32K PETs

ACT PURCHASE LEDGER £120

Commodore Disk £95 Cassette version

Full facilities for maintenance of the Purchase Ledger, the preparation of a list of outstanding balances and printing of remittance advices. The system produces the following printed results: Audit List, Aged Creditors List, Control Accounts, Purchase Ledger Record, Remittance Advice, Cheques and Payment List.

For 32K PETs

Both Sales Ledger and Purchase Ledger are . . .

OFFICIALLY APPROVED BY COMMODORE

ACT Petsoft

INDEXING £15 *Available on CompuThink disk* Allows the user to specify 8 fields and to edit or print any one or a group of these by inputting a common reference. Data access can be either by a numeric file number or any one of the 8 alpha-numeric fields.

INFORMATION RETRIEVAL £12 Originally developed to index magazine articles by title, topic, author, etc., this package stores alphanumeric data on cassette for retrieval by keyword. Well documented and suitable for many other information retrieval applications. The 8K PET version caters for data records of up to 5 keywords of up to 20 characters each and 10 DATAlines of up to 38 characters. Please specify old or new ROM PET when ordering.

GRAPHICS PACK

LARGE CHARACTER £8 Displays your message in large characters, scrolling slowly up to screen, or in page mode. Makes a striking presentation for lectures, exhibitions, shops windows, etc. Prints up to thirty lines of text.

LINEAR PROGRAMMING £8 Solves linear programming problems (constrained maximization) using the simplex method. Contains an explanation of how to formulate the initial tableau for a sample program, provides data statements for running the sample program and gives (option) output of all numbers in the initial tableau, the final tableau, and all intermediate tableaux. Documentation includes sample run.

LINK £10 Just load the routine and run it; then load the first program to be linked and execute a single command. Load the second program and execute one more command and the two programs will be joined into a single program. Can be used to join as many programs as you have room for in available memory; we linked seven. Essential! Specify ROM configurations.

MACHINE CODE HANDLER £12 Various utilities to assist machine code programming. Includes Hex-Decimal conversions and viceversa; clearing, saving and reloading selection of store; execution and core display from specified locations.

MERGE £8 An efficient method of joining subroutines, data or a new program to one you already have on tape. Any number of lines from one part may be joined to any part of another.

MULTI KEY GET £4 How to make the PET recognize more than one key when several are pressed at once — essential for games. A demo is included in addition to the routine itself.

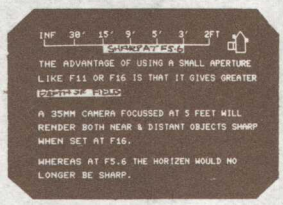
OVERLAYS £8 How to overcome the perennial problem of shortage of memory. This tutorial shows how to overlay programs, transferring variables, subroutines and whole sections of program from one to another. Includes a working demonstration of the technique.

PDAS 32 £20 Essential package of program development tools. Written in machine code. Includes: Line Renumber, also handling GOTOs and GOSUBs, Block Deleter which deletes all lines within a specified range, Dump, with debugging aid to display current values of variables, and Program Lister which lists programs to a printer with cursor control characters rendered as CUL for 'Cursor Left' etc. Please specify old or new ROM version. 8K PETs will require expansion memory. Now includes improved monitor and disassembler plus printer support.

PLANNER £8 An advanced planning program in which president's analysis is performed on your network. Instructions for data entry and an example are included in the program. The tabular output gives the earliest and latest start times for each activity along with the float. Project completion time is also calculated. The maximum number of activities is 22.

PLOTSUB £6 Machine code subroutine which can be called by Basic programs to 'Set', 'Clear' or 'Test' screen plotting elements in an 80 by 50 matrix — i.e. double density graphics! Includes full instructions for use and three examples, one of which will draw the curve of any function expressible as Y=F(X).

PET INDEX £6 A useful index of the main articles, letters, paragraphs and listings of interest to PET users, which have appeared in Personal Computer World, Practical Computing and Computing Today from the date of first publication until January 1980. The index is divided into four general headings: Hardware, Programming, Programs and Applications. Each main heading is then subdivided into various subheadings and then into subjects. You simply select heading and subject from menus and the program locates all references by magazine, date and page number. The program structure may be adapted for other simple indexing applications.


INF 30' 15' 9' 5' 3' 2FT
DISTANCE FROM CAMERA AT F5.6
THE ADVANTAGE OF USING A SMALL APERTURE LIKE F11 OR F16 IS THAT IT GIVES GREATER
A 35MM CAMERA FOCUSSED AT 5 FEET WILL RENDER BOTH NEAR & DISTANT OBJECTS SHARP WHEN SET AT F16.
WHEREAS AT F5.6 THE HORIZEN WOULD NO LONGER BE SHARP.

PEEK & POKE 2 £5 A straightforward, easy to understand introduction to two of PET's most useful commands. Every character inside PET is displayed with its PEEK/POKE number. How to POKE lower case onto the screen, plus some useful applications. Revised version.

PET BASIC TUTORIAL 2 £15 A revised version of our best selling course on programming the PET in Basic. Lets PET take you through its commands and functions at your own speed. Over 50K of lessons including working examples of the programming techniques that are described. Suitable for novices and those with some programming experience, from literacy age 10 on. For a data sheet on the contents of this seven program course, send an S.A.E.

PET DEMO £6 Demonstrates PET's capabilities in a variety of modes. Illustrates correct use of keyboard allowing use of graphics and for mathematical calculations within the program. Demonstrates PET's computing ability using inbuilt 'Trig' functions and for complex formulae. A useful introduction for those whose experience of computing may be limited.

PETSIL £10 A new language for the PET, based on the well known CESIL Interpreter. 15 Operation Instructions include IN for moving a number from a data statement into its Pseudo Accumulator, OUT which levels the content of the PA, STORE which stores a number in a specified memory location from the PA. Other commands include LOAD, ADD, SUBTRACT, MULTIPLY, DIVIDE, JUMP, JINEG, JINZERO, HALT, PRINT, LINE and SCREEN. Direct modes are NEW, RUN, LIST, EDIT, SAVE, LOAD, LABEL and IDENT. Easy to use instructions make it ideal for mathematical wo

PET WORKS TUTORIAL £25 A major 14 part explanation of PET's workings. Designed for those new to computing, the tutorial explores the use of the PET in a series of logical easy-to-follow chapters. The first chapters explain every single key, sign and symbol, and will make the user manual more comprehensive to the first time user. Contained within the Tutorial are working programs which illustrate PET's functions. Recommended for those who want to learn about PET — fast!

THE WORDCRAFT WORD PROCESSOR £325 (CompuThink disk)

'The Rolls Royce of PET Word Processors'

Wordcraft is a word processing programme which has been developed for use with the Commodore PET Micro-Computer and any of a large range of printers.

With Wordcraft the PET becomes a genuine word processing system using all the facilities normally found only on more expensive systems.

Wordcraft can be operated very easily and does not require any specialised knowledge of computer programming. An average, competent typist or clerk would have no difficulty in mastering the system. It is therefore an ideal word processor for the busy small to medium sized business where speed and accuracy are essential in written communications but where staff resources are limited.

Wordcraft is a general purpose word/text processing system which is rich with features normally only seen on larger, more expensive systems. It is designed specifically for the PET, and is entirely written in machine code for efficient and high speed use of the system.

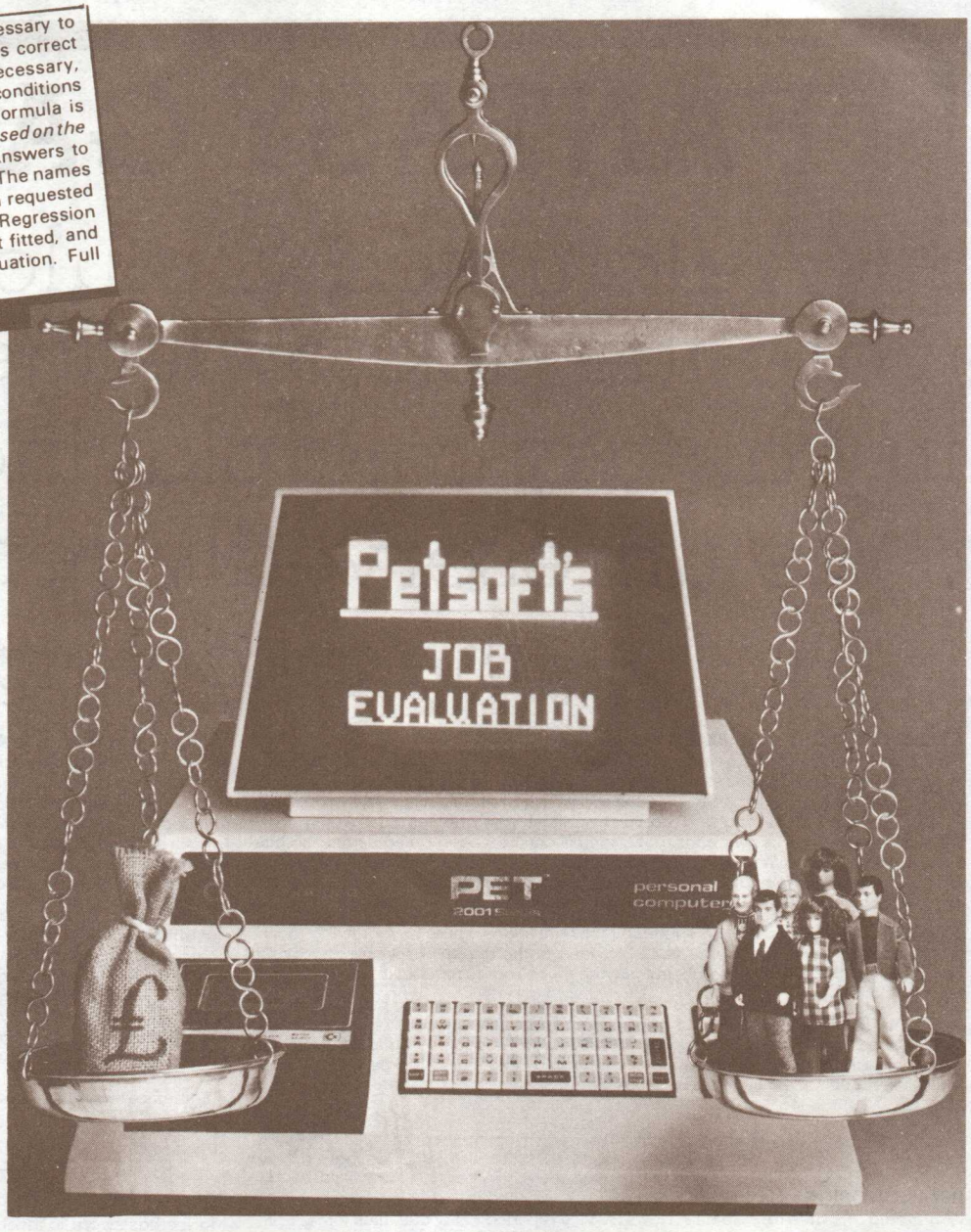
In order to get around the problem of small screen size, Wordcraft provides automatic scrolling of text on the screen in both vertical and horizontal directions. This is accomplished in the program by the continual maintenance of a full page of text in the format required. Wordcraft can accommodate page sizes up to 117 characters wide and 98 lines deep, not including header and trailer lines. This size is more than sufficient for A4 and foolscap pages in portrait or landscape orientation, with margins.

Apart from the actual program size the space required for the page display is the only significant loss from the space available to store the text being operated upon. If A4 pages are used, about 12000 bytes are available for document 'chapters'. (The term 'chapter' is used to refer to that part of a document which will fit into store all at once, and begins on a new page.)

Except for the display area, text is always stored in a packed format, and NOT as it will finally appear. Embedded control characters tell the program about new lines, tabulation, paragraphs, and a lot more. Thus the 12000 bytes are efficiently utilised in constructing pages.

Text may be manipulated and arranged in various ways. In addition to the full use of the cursor control characters of the PET when editing, Wordcraft offers the following facilities. Left and right justification, underlining, block movement and deletion, over-printing, decimal and standard tabulation, indentation, insertion, multiple copy printing, and text centring. It also has the ability to find a particular text string within the current chapter and having found it, replace it with a different string if required. The system allows modular documents to be saved so that additional information may be added at the time of recall. A similar capability is also to be found for producing personalised' letters.

JOB EVALUATION £25 Conducts the evaluation necessary to establish pay structures and grades. Program computes correct weightings for factors — education, training necessary, responsibility over other men and equipment, working conditions etc. — which comprise job value. A Job Evaluation Formula is created for use as a guide to the relative value of a job *based on the thinking of the company or department concerned.* Answers to paired comparison tests with other jobs are analysed. The names of the factors for which weightings are given, are then requested and the comparison procedure activated. Multiple Regression Analysis is invoked to find the set of weightings best fitted, and display them in the form of a Job Evaluation Equation. Full documentation included.



PILOT £10 The latest version of an additional language for the PET, especially suited to writing conversational programs and for Computer Aided Instruction. 15 easy-to-learn one-syllable commands handle the display of string, input commands, checking data against inputs, jumps to other program segments or sub-routines, returns from subroutines, special counters etc. The PILOT interpreter also accepts fundamental Basic commands including LOAD, RUN, NEW, STOP, SAVE Etc.

SCREENSTORE 11 £4 Useful subroutine for use in your own programs allows the contents of the screen RAM to be saved. Up to four full screen displays can be stored.

SEARCH AND FIND £5 Useful tutorial/ utility demonstrates how to locate a particular program on a tape using Fast Forward. Using this method it becomes practical to store many programs on a single long tape, thereby cutting cassette costs.

SUPER LINE RENUMBER £7 A new "Machine code" program specially written to renumber references (GOTO, GOSUB, THEN etc.) in new or exisiting programs. Any start number and increment between lines may be selected. Includes instructions. An indispensable aid to programming.

SELF MONITOR £7 An essential debugging aid which allows you to see your own program execute line by line. Variables below line 999 are also checked. The routine can be automatically deleted from your program.

SOFTWARE MATHS ENHANCER £9 Software method of enhancing the maths capabilities of the PET, includes: RPN Calculator, Hex Arithmetic, Fourier Explicit, Non Unif, 78 Digit Multi, 255 Digit Multi, Small Primes and Large Primes.

STEP BY STEP £19.50 A superbly produced and packaged tutorial for writing programs in BASIC, designed to teach absolute beginners. Consists of 10 two part lessons and a variety of practical tests. 3 cassettes with sixty-five page manual making a full course.

SORT £12 Sort is a machine code routine which will sort a string array, each element of which must be the same length, such as index for a disk coll. The routine is loaded by the user program and occupies the top 256 bytes of memory. Parameters specify an array name, length of the key and whether the sort is into ascending or descending order. It may also be used as a basis for a sort of large disk files.

SCREENPRINT £5 Complete screen to printer dump which allows any screen display to be printed out as hard copy. Even handles graphics, reverse field and lower case on Commodore printers.

TEXT INVERTER £5 Useful routine to convert old ROM program text to new ROM text and vice versa. Also handles DATA statements, Input Statements and string variables. Easily added to existing programs for use as a subroutine.

WSFN Robotics £10 WSFN (Which Stands For Nothing) is the robot-control language which uses simple one-letter commands such as 'F' for 'Forward One Step' and 'R' for 'Turn Right 45°'. The Robot is a small turtle that can move on a 78 by 39 grid on PETs screen. Commands can be combined using repetition, macro definition and recursion to cause the turtle to draw a variety of patterns, including Hilbert and Dragon curves. The language provides a good introduction to important programming techniques.

6502 ASSEMBLER PROGRAMMING TUTORIAL £25

Nine lessons which give an introduction to the 6502 and its usage. Specific not only to the PET, but to all 6502 based computers. Each lesson is accompanied by a number of exercises. The subjects covered include:

1. Binary Arithmetic	Covers unsigned addition and subtraction, and the concepts of carry and borrow.
2. Computer Hardware	Explains the meaning of such terms as processor, memory, registers etc, necessary to the assembler programmer.
3. Programming – 1	Introduces LOAD and STORE instructions, and symbolic variable and location names.
4. Programming – 2	Describes ADD and SUBTRACT instructions, and how to manipulate the carry flag.
5. Addressing Modes	Explains the meaning and use of several of the 6502 addressing modes.
6. Branches and Jumps	Describes unconditional and conditional jumps within a program.
7. Subroutines	Covers the 6502 use of subroutines and stack processing.
8. Logical Operations	Introduces logical operations such as AND and OR, and the corresponding 6502 instructions.
9. Indexing	Explains the meaning of the various indexed and indirect indexed addressing modes.

The tutorial will be found equally useful by both novices and those experienced in other Assembly languages.

Available on Commodore disk, CompuThink disk or cassette. Please state format required.

FANTASY GAMING

Automated Simulations Inc. are the acknowledged leaders in Fantasy role playing software. We unreservedly recommend the following:

STARFLEET ORION £14 8K PET and up

War in the cosmos. The Dirge was old, old. It was old when dust motes sailed the solar wind and only lizards raised stares unblinking toward what men would call the stars of Orion. Without listeners, the Dirge drifted eons in silence until, at last, a ship of a new empire, touched by legend and led by an artifact from another time, would have directed the Dirge to its own ends. But a song is not the singer, and a deathsong has only one purpose. Without warning and almost without witness, the cruiser Ozymandias was annihilated. A single lifeboat shrieked, jumped, fled with a soprano wail. To its own slow beat, the ultimate weapon followed. The song had begun again.

Starfleet Orion brings you the opportunity to fight space battles in your living room. The Deathsong scenario is one of 12 provided in the game. These are of varying complexity with 2 to 15 spacecraft and playing times from 15 minutes to 6 hours.

The two game programs – one battle program and one for scenario building – come written in BASIC for PET. A cassette (also containing the introductory scenario for immediate play) is provided. Simple scenario data file management capabilities in the programs aid you in maintaining your scenario data base. Starfleet Orion also includes: Rulebook, Battle Manual, Ship Control Sheets.

INVASION ORION £14 16K PET and up

"Autarchia . . . The TransGalactic News Service reported today that alien forces from deep space are massing for attack against the Orion Fleet here in what appears to be an attempt to wipe out resistance in the Orion sector.

Sources at Fleet Headquarters say they are confident, even though they are outnumbered by more than two-to-one . . ."

Invasion Orion – a complete tactical science fiction wargame that provides you with scenarios designed to allow players of different skill levels to find a challenging game of space warfare every time! Choose from three levels of play for the computer. And you can have the computer play either side.

Invasion Orion is ready to play as soon as you get it. Just load the program cassette, choose the scenario and skill level you want and enter your orders. In a matter of moments the computer makes its move and automatically resolves combat!

The computer takes care of the details, making the game easy to play. It prompts you for your entries, AND the simultaneous combat is resolved quickly so that you can get on with deciding what to have your starfleet do! No knowledge of programming is required, either. You just play the game.

THE DATESTONES OF RYN £9 16K PET and up (old and new ROM)

A dastardly robber band led by the notorious rogue, Rex the Reaver, has stolen the precious Datestones from the ducal calendar. Your mission is to recover the Datestones before Rex and his cut-throats can slip away.

Using much of the same flexible game system as the popular 'Temple of Apshai', 'The Datestones of Ryn' boasts equally attractive graphics, but in Ryn, you're working against the clock to retrieve the stolen treasures. Not only do the real-time monsters keep you on the edge of your seat, but you must finish your quest before the sun sets! Explore the cave complex where the robbers have taken refuge, but watch out for the other inhabitants dwelling there.

The Datestones of Ryn comes as a complete package ready to play, including game program (on cassette), 1200-byte data file (also on cassette) and colourful 16-page manual.

TEMPLE OF APSHAI £19 32K PET

An opportunity to undertake heroic acts within a labyrinth filled with treasures and fantastic monsters. The Temple of Apshai evokes primordial memories of arcane and forgotten lore as fell beasts and mighty heroes stride the musty corridors of ancient catacombs. The clash of steel and the splinter of bone herald the search for hoarded treasure. There, upon the heaped gold and jewels, broods the spawn of Grendel – waiting, ever waiting, to test the mettle of its foeman. In treasure vault will fall this day man or monster – pouring out heart's blood upon the cold and lichen-crusted floor.

The Temple of Apshai is fantasy adventure, but it goes far beyond any other fantasy adventure game you may have seen for microcomputers. There are over 200 rooms, chambers and passages in 'The Temple of Apshai' (the first title in the DUNJONQUEST series). Over 30 different kinds of monsters guard the many and varied treasures of Apshai. You'll spend hours, days – perhaps the remnant of your life – wandering the ruins. The Book of Lore is your guide and mentor in the Temple. But take care lest the beasts of servants of evil catch you unawares. They'll spring upon you when you least expect them, and then it's your swordarm that must save you. The monsters move in real time, so you've got to choose fast how best to strike, whether to turn and run, or whether to risk calling on weird powers you may only half understand.

"The Temple of Apshai is quite an experience. I am very pleased with it and rate it as one of my favourite PET programs" – Len Lindsay, COMPUTE.

Morloc's Tower £9 32K PET

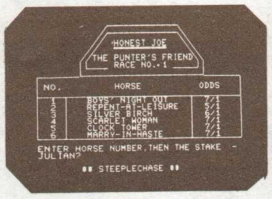
Morloc has sworn to level the city of Hagedorn by tonight, upon the rise of the new moon. Unless Brian Hammerhand can fulfill his quest, none of the inhabitants of the town, pursued by the awesome and evil power of the wizard, will live to see the next sunrise.

Morloc commands the fire that burns the soul and a host of evil and inhuman servitors – from a pack of ravenous hounds to a fiery salamander (a species of corporeal fire elemental) and worse. The foul warlock rests secure in his tower, but the seeds of his destruction are sown therein. As Brian Hammerhand, can *you* puzzle out the workings of Morloc's possessions and so use them against their master? Will *you* slay the archvillain and save the fair maid Imelda for better uses than roasting in a fireball???

Morloc's Tower is MicroQuest Number 2 of the DUNJONQUEST series. In it you'll find 3 kinds of rings, a magic sword, 2 amulets, half a dozen other treasures, 30 rooms, 18 real-time command options, and a dozen types of monsters including crafty old Morloc himself. Morloc's tower is an intelligent opponent for you to vanquish. **Morloc's Tower** is a fascinating game that's easy to learn but a real challenge to master. Even after you've figured out all of the puzzles (or think you have), you'll play again and again to improve your score. Be warned: the optimal solution will prove to be even more elusive than the mad wizard. Here's hours of fantasy adventure for you and your microcomputer.

Morloc's Tower includes everything you need to begin your quest: game program, 1200-byte data file and colourful 16-page manual.

Simulations and Games



1000 MILES £5 An unusual computerized card game popular in California. PET shuffles the deck before dealing each player a hand. Cards include hazards such as 'Flat Tyre' or 'Speed Limit — 50', remedies like 'Spare Tyre', safeties including 'Extra Tank' and distance cards. Players discard or play cards until the winner has travelled 1000 miles.

ADVENTURE £5 Micro version of the famous mainframe game, full of dungeons, dwarves and demons. Pick your way through a labrynthine cave system, gathering treasure, but beware snakes, magic wands and the guardians. In extremis you can always opt for reincarnation . . .

AIRCRAFT LANDER £7 Authentic program simulates the landing of an aircraft in *real time*. You control flaps, throttles, brakes, undercarriage etc. Instrumentation displays altitude, airspeed, rate of descent, horizon, distance to touch down etc. Main program is preceded by instruction program, and followed by a further program which introduces random effects e.g. Fog, sudden winds, etc.

ALARM CLOCK £5 Elegant and continuous large digital display of time in hours, minutes, seconds, plus resettable alarm with visual warning and reminder messages.

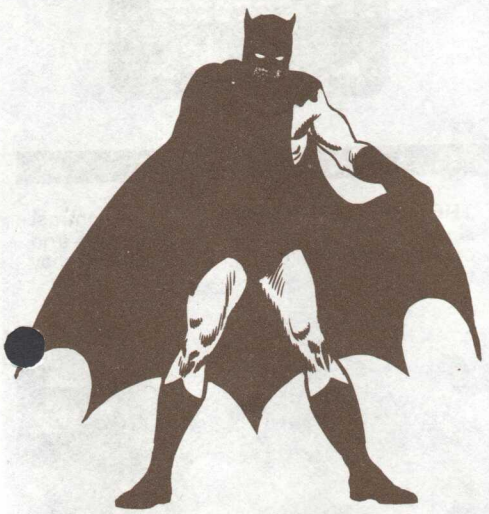
ALIEN INVADERS £4 The paranoia scenario: you are the only human who knows that aliens are about to invade. No one believes you. They are armed with radon guns — you have only a cobalt laser. The Alien ships relax their force fields prior to firing; only then are they vulnerable . . .

ATLANTIC PATROL £6 An exciting Naval game in which you command a warship patrolling the Atlantic sea lanes. You mission is to sink as many enemy ships as possible. Your controls include Direction, Speed, Main and Secondary Armament, Torpedoes, Smoke etc. Watch out for U-Boats.

AWARI £5 A fascinating board game in which you make your moves around the board displayed on the screen. But beware, the computer will actually learn from its mistakes and improve its level of play! Excellent graphics.

AMAZEALL £5 A complex maze is generated on the screen display; you have to thread your way through. If you get lost the computer will find a way out for you. Printed copies of the maze can be produced on your printer. Really good fun!

BACKGAMMON £8 The superlative graphics make this game a real pleasure to play. It took some doing to squeeze the whole program into 8K, but we think you will be impressed with the results. PET shakes the dice and moves the counters as you instruct. If you get fed up playing against the PET, the computer can play itself, which makes a great demonstration.



B*TMAN £5 Inspired by the well known TV series, this exciting game contains some of the best graphics we have seen on the PET. The object is to get B*tman out of a blazing skyscraper to the waiting B*tmobile with as much loot as possible and to zap as many villains as possible on the way. The Penguin, the Joker and all your favourites are there. Not the most intellectual program we have published but terrific fun. The Teacher program instructs in the gentle art of zapping.

BOMBER £5 Exciting arcade game with fast moving graphics and superb sound effects.* Your mission requires the destruction of a target heavily defended by anti-aircraft batteries. The aircraft controls allow you to climb or dive, fire forward machine guns, or drop bombs singly or in clusters. The angle of descent can be controlled for maximum effect. Be warned: you cannot land until the target has been bombed flat and fuel is limited. Three levels of play. We rate this game far better than pub versions. **Sound effects via M&N pins or through user port sound generator.*

BLACKJACK £5 Permits five players plus dealer. An American program with excellent graphics; as each card is played or turned over, it is layed partially over the others in a realistic manner. As the number of named players changes, the cards are relocated. Scoring is automatic and summarized at the end of each deal. The deck is reshuffled after 52 cards have been dealt.

BLITZ £5 A video game in which you command an anti-aircraft battery defending London. A direct hit on a falling bomb scores you 20 points, on a bomber 30 points. However, you lose 100 for every building destroyed.

BRANDS HATCH £7 The thrills of the race track on your own screen. Carefully drive your racer around an authentic Brands Hatch circuit. Mind you don't over rev your engine or skid off by braking too hard. Demonstration lap given by computer. Carefully researched and easy to use program.

BREAKTHROUGH £5 Classic video game with a moving gun shooting bricks out of a four layer wall; when you have made a hole through all four layers, you shoot one more bullet through the hole to win. Three speeds of play, each with a limit on the number of shots. N.B. Fast speed is very difficult but achievable. Program can be modified to vary speed and wall thickness.

BRIDGE CHALLENGER £10 You and the dummy play four person Contract Bridge against the computer. The program will deal hands at random or according to the criterion for high card points. You can review tricks, swap sides or replay hands when the cards are known. No longer do you need four people to play! Two programs and full instructions.

BULLS & BEARS £9 Jeff Boetticher, Head of the American Byte Shop chain, reckons this is the best micro computer game available anywhere. Each player starts with $50,000 to invest on the stock market. By manipulating shares in the companies you control and keeping a tight rein on the production side, it is possible to become a millionaire. Revised and improved U.K. version.

DEATHSTAR £5 Written by an aerospace engineer to simulate the final sequence of 'Star Wars'. Use your skill to pilot a rebel X-Wing fighter down the trench on the surface of the Deathstar to launch a torpedo against its single weak point, whilst avoiding Tie fighters launched against you. Successful strikes generate a satisfying detonation.

DEATHWORLD V £5 Afficionados rate this one of the best galactic games ever. The screen represents a universe, through which you steer, ever alert for Romulan scout ships and forts. You can only refuel and rearm at a Starbase. Really outstanding.

DEPTHCHARGER £5 Your duty is to clear the shipping lanes of the U-Boats which infest them. Five randomly positioned submarines appear on your sonarscope; can you destroy them with your directional depthcharger before England starves? Excellent graphics.

DODGEMS £4 Fast moving arcade game with all the fun of the fair. You race your dodgem car round the screen ramming PETs dodgem before he can get you. Watch out for randomly positioned bollards. Fast and slow games with three levels of skill.

DRAUGHTS £6 Let PET challenge you to a game. The board and men are displayed on the screen and all moves are checked for legality.

ELIZA DOCTOR £8 Some years ago this program was developed to run on large mainframes. Now we have succeeded in making this fascinating simulation of artifical intelligence run in 8K without losing anything important. Talk to the Psychiatrist and she will answer you back "intelligently". We do not promise she will solve your problems but . . . PET: "What is your problem?" User: "I hate my mother". PET: "Why do you hate your mother?" User: "She did not love me." PET: "What does that suggest to you?" User: "Did you hate your mother?" PET: "I will ask the questions if you do not mind!" And so on.

EL PRESIDENTE £7.50 Superb simulation of the economy of a South East Asian State. As President, you will be faced with many decisions, political, economic and humanitarian with their complex consequences. Whether you survive your seven year term of office depends on how well you handle the economy. Certainly, one of the most fascinating programs we have ever seen. Free data sheet available.

ELLO £5 A computerised version of EDWARD DE BONO's famous game of L-O. Play against your PET. Hours of endless enjoyment. Rated the best lateral thinking game ever.

FOOTBALL £4 Just like the TV games; you play football against an opponent (not the PET) on PETs screen graphics. Special Multi-Key Get routine allows both players to move their paddles at the same time. Fast machine code program with high resolution graphics.

FORCE4 £6 Exciting yacht racing game in which boats are manoeuvred across a 2668 square board. Obstructions to navigation, islands, buoys represent hazards to be taken into account. Wind direction and speed change throughout the game requiring frequent course amendments. Other indicators display hull speed and course for each boat. Happy sailing!

GOLF £5 Play professional golf at home. Choose your club size and swing strength Highlight your weaknesses and handicap. Excellent graphics and scoring.

GRAPHIC GAMES PACK £6 Five games which use the PET's graphic capabilities to add to the fund. Includes ZAP — manoeuvre a half track around a course avoiding obstacles, shooting at targest, SLOT MACHINE — an excellent simulation of a one-arm bandit, QUICKDRAW & TOUGHDRAW — let you test your reactions against trigger happy gunslingers, and BLOCKADE — you are the captain of the last starship, defending your planet against blockade. The supplies will run out in a finite but unknown length of time unless you can break out . . .

GREMLIN £5 Very hard to describe this classic game where you steer and shoot your tank to eliminate the screen full of enemies. Bizarre but very highly recommended.

HEXAPAWN & FRAMEDART £5 HEXAPAWN is played with two sets of three pawns on a 3x3 board, the object being to reach the other side or to prevent the computer from moving. Be warned — PET learns from its mistakes and improves its play each game. FRAMEDART generates a constantly changing screen pattern to relax you after Hexapawn.

HUNT £10 A new concept in fantasy simulations which has achieved wide acclaim. "The context is that of a search for a defined object, typically Atlantis or the Holy Grail. The objective, the names and natures of the searchers, their antagonists and the properties of the space in which the hunt is conducted are defined — by you!" — Practical Computing.

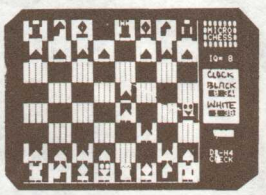
KRIEGSPIEL £8 A game for 2 players based on the chess version of the famous war game. It involves the players on separate chessboards without sight of the opponents pieces. The computer takes the part of the referee displaying to each player their version of the board and maintaining score. Recommended.

LEM LANDING £8 Far and away the best lunar landing simulator we have seen; also the most complex. Bringing the LEM module in from orbit to land on the lunar surface requires considerable skill. Displays altitude and rate of descent, horizontal distance to landing site. Controls include thrust, attitude angle to thrust, interval to engine burn. Three levels of skill. Authentic orbital equations and excellent graphics. Not same as 'Lunar Lander'. Comprehensive instruction program precedes main program.

LIFE EXPECTANCY £4 Asks you fifty questions concerning your health, heredity and life style in order to calculate how long you will live. Compiled from figures prepared by life insurance actuaries, the results should be statistically accurate.

LIFE FORMS £7 A fast new machine code version of Conway's classic game of LIFE — with several extra features. LIFE simulates the birth and death of cells according to the laws of evolution. You enter a pattern of cells on the screen and watch as each generation develops in a series of fascinating patterns. Four special patterns have been pre-programmed and can be selected on demand.

LE PASSE TEMPS £5 Challenging and original strategy game from France. You and PET take it in turn to drop balls into a rack. To win a player must manage to arrange his balls in a vertical, horizontal or diagonal row. Sounds simple? Don't count on it; PET plays a mean game. This is the game we play in the office when the Boss is out.



MASTERMIND £5 If you have ever played Invicta's MASTERMIND© game, you will know just how challenging this brainstretching test of your logical powers can be. Your efforts to guess a randomly chosen number with the aid of 'clues' from the computer, are assessed in terms of IQ rating. 10 levels of play.

MAXIT! £5 An ingenious board game played on 8x8 board. You can only move horizontally whilst PET is allowed vertical moves only. Warning: PET's strategy is very cunning.

3D MAZE £5 An imaginative new concept in maze games — instead of looking down on the maze, you find yourself inside it! As you move the screen displays a three dimensional picture of a series of corridors, corners and dead ends. There is even a HELP routine which shows you your position from above. Outstanding!

3D OxO £5 Three dimensional noughts and crosses on a 4x4x4 matrix. Self explanatory; a real mind blower.

MAZEMASTER £5 Draws a maze on the screen, from which you must escape using the keypad to control direction. If you get lost the computer will show you the way out! Great fun for all ages.

MICROCHESS £14 Perhaps the most famous chess game of all. Peter Jennings latest version incorporates the improvements suggested by hundreds of users. Written in machine code, the program just fits into the 8K memory. It displays a graphic chessboard and uses standard algebraic notation to describe the moves. Every move is checked for legality, and the program even handles castling and en passant captures. You may set up special board situations and play them out against the computer. "Should be well received at the low asking price"—Computing Today. (Disk version £17.50). Over 50,000 copies sold.

THE MONEY GAME £5 Your chance to invest on the stock market and the turf. Fortunately, rich uncles die regularly leaving you shares. You may get away with not declaring your gains — or you might be arrested!

MOTOR RACING £6 Exciting race track simulation. Controls include accelerator, brake and steering. Good graphics.

Contd. ▶

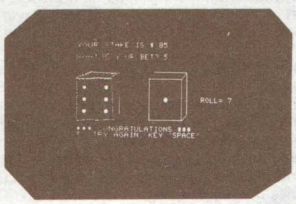
MEAN STREETS £7 A superb game of detection in which you pit your wits against such detectives as Sam Spade, Sherlock Holmes and Inspector Clousseau. The night air is rent by a piercing scream — Murder! Suspects include Professor Moriarty, Fu Manchu and the Butler. You, the computer and two 'ghost' detectives are on the case. Your job is to deduce who dunit, where and with what weapon. Three levels of play include: Holmsean reasoning, Inferior Kojak or Columbo slow. A far from elementary test of your powers of deduction, my dear Watson. Full instructions included.

MICRO-DRAUGHTS £6 Play draughts against the PET using this fast machine code program. Excellent graphics similar to Microchess. Switch sides if you're losing — or have PET play itself.

MUSIC £10 This program plays music via amplifier and speaker connected to user port (or via radio placed near it!) The music to be played is encoded as data statements. The method is detailed in documentation and five example tunes are included.

NIM £5 The classic matchstick game. Try and force the computer to make the final fatal move. You arrange the set-up and decide who plays first. Or play a human opponent with the PET monitoring the game.

ORGAN £6 Displays a screen depicting the PET keyboard as a table of musical notes. Press the required key to produce the appropriate note. Plays music via an amplifier and speaker connected to the user port (or via radio placed near it!).



PARTY PACK £5 Children love this package which includes GUESS THE NAME, where your clues include the first letter and sex of the name, and SNAP with variable speeds. CONSEQUENCES displays a random series of sentences describing who meets who, what they do, and the results. The sentences can be personalised to intriguing effect.

PERSONALITY TEST £5 Dr Sinister asks you fifty intriguing questions, from which he will construct your individual personality profile. Two programs overlaid. Surprisingly revealing!

PET POETRY £5 We think the poetry generated from PETs data files — which you can easily amend — is as good as most of the rubbish that gets published nowadays.

PINBALL £5 This program is a must for all PET owners, playing an excellent game of pinball. Complete with flippers, double scores and free games. Very addictive.

PUNTER £5 Excellent simulation of Racing on the Flat for up to five players who, having assessed the form from a race card showing distance, going, raceweights of runners etc., may bet via a totaliser. Commentary is given at each furlong. Winnings and the financial situation of punters are printed out after each race.

SCRAMBLE £5 The computer generates anagrams of well known words for you to unravel. Not nearly as easy as it sounds. Crossword puzzle addicts will adore this.

SOLITAIRE £4 Now you can play this famous game on the PET. If you make a mistake, cheat a little and have the computer back step a few moves.

SPACE SHUTTLE £5 Can you manoeuvre your NASA shuttle to dock with an orbiting space station before you run out of fuel? Highly rated by all computer space afficionados.

STEEPLECHASE £5 All the thrills of the National Hunt. Meet 'Honest Joe' the punter's friend, and lose your shirt on the horses. Very good graphics. Start with £1000 and take your chance.

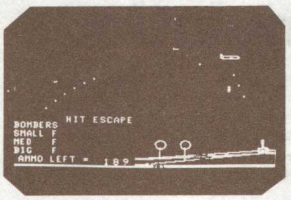
ST*RW*RS £6 High speed reconstruction of the dogfight between Rebel X-wing fighters and Imperial Tie fighters. The enemy spacecraft can only be destroyed by laser fire when you manoeuvre them into the cross-hairs of your sights. Exhilarating with excellent graphics. (Not the same as 'Deathstar', 'Startrek', etc.)

SUB SEARCH £4 A new submarine-hunting game with dynamic graphics. Save the convoys by depth charging enemy U-boat.

SUPER ALIEN ATTACK £5 A revised and improved version of our best selling space game. Briefing program explains computer display of Flight/hours, fuel/hours, initial target ETA, updated ETA, Alien kills etc. After that you are on your own in a Galaxy thick with hostile Overlords, space pirates, friendly alients and deadly meteorite showers. Dynamic graphics. Children of all ages adore it.

SUPER OTHELLO £7 Our resident expert finds it hard to beat this version of one of the most famous of all computer games. Played on a chess board, this program allows Three levels of play. Warning: This game is very addictive.

SUPER RHINO £6 At last an "extra special" version of probably the most popular computer game for the PET. With this version you can vary the density of the forest and the ferocity of the rhinos. It is also possible to select the number of rhinos. The direction keys can be pressed as quickly as you like. This program is a beauty!



SUPER BREAKOUT £5 Fast machine code version of one of our top selling arcade games with added features, including five speeds for left/right paddles. Gets progressively harder as score rises. Can you beat the championship score of 10,789?

SHUT THE BOX £5 Prize winning implementation of the classic arcade game for two players or one player against the computer. Each player has a board number 1 to 9. Players alternately roll two dice and cover numbers to the total of the roll, until they shut the box or are unable to continue. Well executed, fast moving graphics make this a pleasure to play.

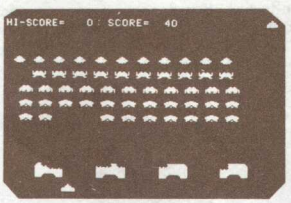
SUPER STARTREK £8 Excellent version of the most famous computer game of all, makes full use of PET's screen for graphic display of movement, photon torpedo trajectories etc. First program initializes and provides comprehensive instructions. Second segment loads main game. Watch out for particularly vicious Klingons. Complex but highly recommended.

TABLUT £5 Game of intricate strategy on a 9x9 board. Pieces move like chess rooks. Defence (PET) tries to escape to edge of board. Player attempts to surround him. Chess players will particularly enjoy this.

TARGET £5 Chase a moving target around the screen. But you must not cross your trailing tail! You can vary the length of your tail at the start of the game. Up to nine players can participate. Try your hand against the clock.

THREE OF A KIND £4 The computer selects nine words. You and PET take turns to pick one out, the object being to get three of the same letters into your word selections. A real brain boiler!

TILES £5 A challenging graphic game which requires you to move one large square amongst a number of smaller squares from one side of the board to the other and back. It takes PET 138 moves — can you do better?



The Original Cassette Magazine for the Commodore PET

CURSOR

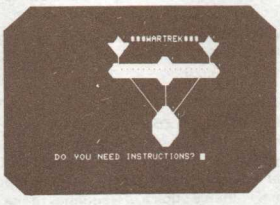
CURSOR — The cassette program magazine for PET owners. Mailed to you by first class post, each issue contains a dynamic graphic cover, table of contents and at least five new programs. There is a featured game which might cost £8 elsewhere, plus tutorials, programming aids and business routines, and of course CURSOR Notes with news and equipment reviews.

U.K.: £36 for one year subscription (10 issues)
Overseas airmail: £45 for one year.

"CURSOR is renowned for the quality of it's programs" — CREATIVE COMPUTING

THE GREEN SCREEN £8.50 A high contrast screen which reduces eye strain and enhances the look of the PET. Quick and easy to install.

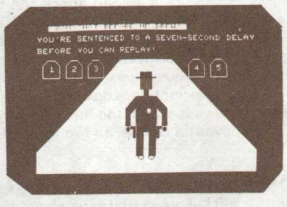
TIME TREK £14 A *Tour de Force* in real time action strategy games. With nine levels of difficulty, this challenging game is easy to learn, difficult to master and impossible to forget. You are commander of a starship. The galaxy is populated with unidentified objects, stars, starship bases (your sanctuaries) and, of course, the hostile and unfeeling enemy. Your mission is to blast the enemy into cosmic dust, using your weapons and defense shields. Using your wits and quick ac tion, you must search out the enemy ships while monitoring your energy reserves carefully. And this is in *real time*! You must steer around stars, thinking fast as you weigh your best strategic use of weapons, shields, and starship bases. Sound effects add to the fun. Time Trek features include excellent graphic effects, nine levels of difficulty, optional moving enemy ships on the PET, galaxy map, long range screen, short range scan, energy read-out, speed and direction control. All in real time action.



WARTREK £9 A superb advanced version of the famous Startrek game, in real time. Now improved to include three levels of play. Warning: Considerable skill is required to pilot the Starship Enterprise through a galaxy thick with Romulans, and menacing Klingons. Unless you have previously played Startrek it may take some time to familiarize yourself with the workings of the Warp and Impulse engines, Long and Short Range Sensors, phasers and photon torpedoes. An interactive instruction program precedes the main game.

WAR OF THE LAST £9 An outstanding example of Wargaming techniques used in a complex simulation of diplomacy and geopolitics. The game is set in the near future, in a world of dwindling resources. Up to six players control countries which must trade with one another in order to build up the resources and weapons stock necessary for survival. Consumate skill is required to avoid escalation of tensions which may lead to a nuclear attack. To guide players the screen display shows a world map, a map of the adjacent territory indicating ownership and military status, plus Resource, Hostilities and Trade Pool summaries. These are updated as decisions taken are displayed in the prompt box. Various sophisticated strategies may be employed to bankrupt an opposing nation, including dumping of his principle export in order to render it valueless. Alternatively, shortages may be created and wars provoked. This is a serious game which played intelligently, can help to illuminate the arcane world of global power politics.

WEIGHT CONTROL £4 Checks your age, sex, height and lifestyle before calculating your optimum weight, and correct daily calorific intake. A second program generates a selection of menus to match the required consumption of calories.

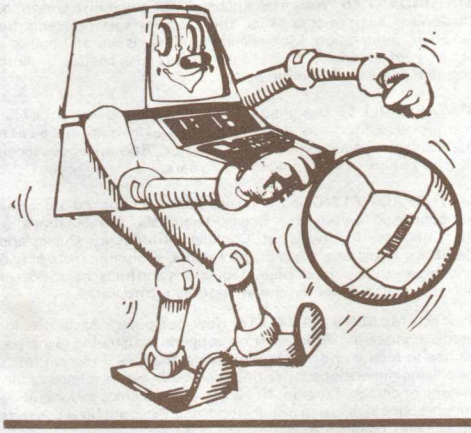


WORDPACK £7 Beautifully executed package contains three famous games. Crossword fans adore HANGMAN, the classic computerised word guessing game. Each wrong guess erects an additional part of the scaffold and eventually hangs the poor rogue. Only this rogue gets up, waves and walks away! With SLIDER the aim is to slide the 15 letters around inside a frame until they are in alphabetical order. BOOM is a beautifully executed maze game, where the object is to pick your way through a minefield. The mines are buried and your only aid is a somewhat unreliable mine detector. One false step and — BOOM!

SPECIAL OFFER!

the Petsoft T-SHIRT...

the PETSOFT T-SHIRT... only £3.45 in Small/Med/Large. Printed in Red & Blue on White!



MICRO POOLS PACKAGE £20

Now let PET help you win a fortune! Every micro-owner will clamour for this superb POOLS-PACKAGE consisting of 5 programs, all intensively REM'd (explained) and written in easy-to-follow single statement separated BASIC. New micro enthusiasts . . . **You need this package** as an easy tutorial in 'nested loops', DATA files, Read/Write using mixed strings and numerics, decimal point alignment routines etc, etc. Advanced enthusiasts will find it a delight to tinker with and possibly fine-tune to a . . . fine win. We watched with awe as PET printed out in six heat columns as line-by-line Match Analysis of Goals and Points for each Home and Away team and produced a 1, 2, X forecast for every match on the coupon!

We believe this will top the charts as one of the most popular micro programs. Comes complete with 4 pages of full, easy-to-follow documentations. *"I trust your micro-computer program proves a great success. Best wishes – IVOR BAILEY."* (World famous *Sporting Chronicle* pools expert)

Educational Mathematical and Scientific

ARITH £5 A maths training program for the classroom. Computer provides problems for solution by a group of people and an analysis of the group's performance is provided. Level and complexity of problems can be preset by a teacher or tutor. Suitable for children aged 6-12 years.

ATOMIC WEIGHTS £5 Given the name or symbol of any chemical element, the program displays its atomic weight and atomic number. Accurate formula weights and percentages of each element are calculated for chemical formulae entered. Documentation includes full instructions, sample run and line by line documentation.

ALPHABET BOOK £5 Superb teaching aid for kids — and great fun. When a key is pressed the program displays first the character then an object starting with that letter, and finally a drawing of the object. For example, 'C' generates the word 'Castle' in large letters followed by a splendidly solid looking fortress. Excellent graphics throughout, some of them moving.

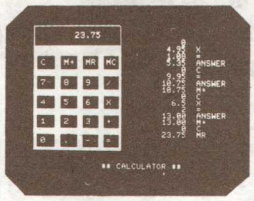
BIOLOGY MULTIPLE CHOICE £6 C.A.I. program tests and stimulates knowledge of: Bone Structure of Birds, Calories, Bone Structure of Humans, Plant Structure, Protein in Urine, Eggs and Food, Glucose in Blood, Calorific value of Fats in Blood, Temperatures and Enzymes, Parts of the Plant, Human Body Temperature, Fungus, etc.

BIRTH CONTROL £12 Birth control information is important to teenagers, of course. And many adults and parents can still learn a thing or two as well. This program explains the process of conception and birth thoroughly, beginning with puberty, and discusses all currently available techniques for prevention of unwanted pregnancies. You will learn the effects of puberty on boys and girls. The role of the male and female in conception. The what and why of menstruation. After you've mastered the birth basics, you move on to the preventive techniques. And, perhaps most important, popular fallacies are cleared up. Too many unwanted pregnancies occur for lack of basic contraceptive information. VitaFacts has the information you need.

COURSE HANDLER £95 A must for School Timetablers. The program handles all the information relevant to creating a 4th/5th or 6th year Option Scheme and is particularly useful where an "Open Choice" of subjects is offered to pupils. The program maintains, via a simple dialogue with the timetabler, a file of pupils and their requests and allocations and a file containing details of the Option Scheme. Facilities are provided for viewing the scheme, the classes, the pupils and the class clash matrix. The COURSE HANDLER will fit the pupils against the scheme by 'Best Manual Package' method but these assignments may be overridden by the timetabler if they are unsuitable. Further, pupils may be selected for editing by class or name for final adjustments to their choices. Described by users as "A great asset" and "A very useful tool". Suitable for a PET with 32K bytes and two cassette recorders. Full 65 page manual supplied.

CLASH £25 A supplement to the "Course Handler" program, which utilises the data tapes produced by the Course Handler and provides the means of viewing an overall subject clash table, enables class listing to be obtained from RAM, provides an alphabetic sort routine for the pupil data, and allows the re-recording of the pupil data to enable its use in alphabetic order in the main Course Handler program. Printing is selected for either the screen or a printer.

COLOUR PROCESSING: E6 & CIBACHROME £8 How to process colour films. Full instructions tell you what to do and when. Calculates development times, filters and filtration for Kodak E6 Reversal and Cibachrome Systems. Triggers audible cues if PETSOFT Soundbox is plugged in.



CALCULATOR £5 Comprehensive simulation converts numeric keypad into a four function calculator with memory and automatic constant. Features include fixed or floating decimal point, with round off or down. A calculator display is shown on screen and all steps are listed. Alternatively, a printer may be used to turn the PET into a powerful printing calculator.

CHEMISTRY TUTOR £7 Comprehensive tutorial dealing with atomic numbers, element symbols etc. Choice of difficult or easy questions.

76 COMMON BASIC PROGRAMS £15 A collection of 76 useful programs on one cassette from Adam Osborne's best selling book. These include personal finance, maths, statistics and general interest topics. Excellent value for stand alone or incorporated use.

CRYPTO PACK £8 This is the complete kit for all those interested in cryptography, codes, ciphers and cryptanalysis. Developed by Dr Michael Richter, the package includes Cryptosub, General Cipher, Cryptanalyser and New Cipher programs.

CURVE FIT £7 Data Analysis made easy. This program performs a least squares curve fit on seven standard equation forms e.g. linear, exponential, logarithmic etc. and calculates the correlation coefficients between these curves and the input experimental data. Provides a double density graph plot.

DRINKING AND DRUGS £12 Lack of knowledge, especially among teenagers, combined with the easy availability of drugs and liquor and the pressures of work, personal problems and peer groups, can explosively combine to produce a real drinking or drug problem. And it is a *family* problem affecting adults and teenagers. For teenagers, the program's information aids in making better decisions. The cassette does not lecture or talk down. It provides the straight-forward facts about the threat drugs and drinking pose to health and happiness. For parents, this survey provides greater understanding of a serious problem that every family may face.

ENGLISH MULTIPLE CHOICE £5 The program fires a long sequence of questions relating to correct English useage, followed by four possible answers from which you must select the correct one, while PET keeps score. A serious educational program which is also great fun.

EXAM ENTRIES £5 Processes the names of students sitting examinations in up to 26 subjects, or combinations of these subjects. Delivers lists of all students sitting a particular subject or combination.

FOURIER SYNTH £5 Allows user to observe the result of adding harmonics of various magnitudes and phases to a fundamental sinewave. The equation of the displayed wave form is shown at the users choice and the maximum excursion from the zero line is also shown.

FOUR STROKE £6 Explains and demonstrates through the use of excellent dynamic graphics the action of the four stroke combustion engine cycle. Recommended.

FRENCH VOCAB £10 A program to test the understanding of French words or phrases. The questions can be asked in either English or French and the answer given in the opposite language. The program tests a vocabulary of up to about 50 words and phrases, enabling the student to start or restart at any point or take questions in randomised order. A sample vocabulary is included and can be replaced easily by teacher or student by changing data statements to produce as many individual tests as required.

FRENCH/ENGLISH TUTOR £6 The computer tests your language skills from English to French and French to English. Answers included, of course.

FREQUENCY RESPONSE £5 This prints on screen or printer the frequency response of any linear transfer function, which can have a finite delay, constant gain and up to 10 poles and 10 zeros, which may be real or complex. The user is asked to input the various elements of the TF, then a choice of frequency range and interval is made (half octave, octaves or equal increments). After the calculation the TF or frequency range may be altered, allowing iterative design of filter networks etc. Of interest to anyone involved in Control Theory, Bridge and Filter Design, System Dynamics, etc.

GROWING UP (ADOLESCENCE) £12 Teenagers and parents. Often a difficult combination, and a difficult time. This VitaFacts program helps teenagers cope with adolescent life. It helps parents understand the changes in teenagers. And it helps the whole family gain perspective and understanding, creating lines of better communication. Teenagers learn about the physical and emotional changes taking place—powerful, often mysterious feelings. A thorough and straight-forward discussion of the sexual effects of puberty is included, plus information on contraception and dealing with parents. For parents, information is provided to help make adolescent changes easier for their children. Discussions of parental over-protectiveness, inconsistencies, and responsibilities help parents maintain a balanced perspective.

GERMAN VOCAB £10 Similar to French Vocab but specifically adapted for German, including the umlaut.

SPANISH VOCAB £10 Similar to French Vocab, but specifically adapted for the accents and format (including leading exclamations and question marks) of Spanish.

GERMAN VERBS £15 A set of four programs providing for 94 of the irregular verbs most commonly required for A-Level German, a test including infinitive, present, imperfect and perfect in German, and English infinitive. The verb list can easily be modified by teacher or student to provide additional vocabularies.

HEART ATTACK £12 This course describes just what a heart attack is, and how to recognize one. The right knowledge and action when someone is experiencing a heart attack can literally mean the difference between life and death, and that knowledge is presented clearly. From treating an attack, to the coronary care unit, to preventing a second attack — it's all here. Even more important are the steps to *prevent* heart attack. The main causes—including the role of cholesterol—are discussed in detail. The roles of proper diet and exercise and the hazards of smoking are explained. This is a powerful course, and you will be glad you took it.

INTERPERSONAL CHECK LIST £10 The ICL was evolved by psychologists Rolfe and LaForge. Used extensively in management and personnel training, it gives a deep insight into the real 'you' and your projected 'image', or that of others. Totally frank reactions to 134 personal character descriptions, presented singly on PET's screen, produce an extensive analysis of hostile, loving, dominant and submissive character traits, plus measurements of reaction frankness, and depth of self-criticism. Not for the faint-hearted, ICL is in four beautifully-executed programs, each nearly 8K long, the first with full instructions. ICL lets you know yourself and others better. Of enormous help to professional trainers also.

LINEAR REGRESSION £5 Comprehensive program also computes errors of slope and intercept. Options to print table of residuals and to calculate both regression lines without re-input of data. Idiot proofed.

MATHADAPT £5 Written by 'Kilobaud' PET columnist, Greg Yob, to develop basic maths skills, the program sets problems for Addition, Subtraction, Multiplication and Division, and marks a report card. However, *this* program gives you control on both problem limits and their difficulty.

MATHS DRILL £5 Designed as a teaching aid to develop the four mathematical functions. It has four grades of learning and gives a mark and assessment at the end of each test. Recommended for all "figure hungry" children aged 6-12 years.

MATHSPACK £12 Comprehensive package of linked programs all contained within 8K. Solves Factorials, Combinations & Permutations, for types of Complex Arithmetic, Cubic and Quadratic Equations, finds Prime Factors, evaluates roots of two and three variable simultaneous equations and finds the inverse of a 2 by 2 matrix. Error detention features incorporated.

MODEL MAKERS PACK £10 Now computer assistance for model engineering. Program No. 1 converts from metric to inches, inches to metric and 1/64" with scale changes. Program No. 2 calculates dimensions for O-ring grooves in water pumps or oily steam conditions. Program No. 3 computes blank size for cutting simple spur gears, using a multi-tooth hob Program No. 4 converts micrometer readings to inches and millimeters.

COMPUTER AIDED DESIGN of electronic circuits

Computer Aided Design (CAD) of electronic circuits is a widely used technique by professional engineers. In the Past CAD programs have in general only been available to those designers who had access to mainframe or mini computers. This series of programs called CAD have been developed specifically for the PET by Dr. M. E. Brinson, a leading authority on the subject. These packages allow electronics enthusiasts, engineers and educators the opportunity to experiment with computer aided circuit simulation. The intention has been to make available, at low cost, circuit analysis and design aids which allow PET owners the chance to get started in this exciting area of personal computing. As users become familiar with CAD techniques often the size and complexity of the circuits they attempt to simulate on the computer will prove to be considerably greater than could easily be achieved using pencil and paper methods. Computer circuit simulation, when used correctly, can give a real insight into the operation of a circuit, and also save time when constructing and testing a circuit.

AC CIRCUIT ANALYSIS £50 A general AC analysis program with component modify and increment facilities. The second program in a Computer Aided Design package specially written for electronics enthusiasts and engineers. Developed for the small computer user this program can be used to investigate the frequency response of circuits which include resistors, capacitors, inductors, diodes and transistors. To use the program, answers to questions displayed on the VDU are entered from the keyboard. These questions include requests for data describing circuit components, their correction, commands for a.c. circuit analysis, and commands to modify and increment values. This interacative program will allow you to simulate circuit frequency response using the computer before constructing a circuit. Full 45 page manual supplied.

DC CIRCUIT ANALYSIS £50 A general D.C. circuit analysis program with temperature scan capability. The first program in a Computer Aided Design package specially written for electronics enthusiasts and engineers. Developed for the small computer user this program can be used to analyse the d.c. performance of circuits which include resistors, diodes, transistors and d.c. voltage and current generators. To use the program, answers to questions displayed on the V.D.U. are entered from the keyboard. These questions include requests for data describing circuit components, their value and connection, commands for d.c. circuit analysis, and commands to modify and increment component values or the circuit temperature. This interactive program will allow you to simulate d.c. circuit conditions using the computer before constructing a circuit. Full 30 page manual supplied.

MAT & MULT £15 Computer aided Learning course in matrix algebra and matrix multiplication, specially developed at Sunderland Polytechnic. We believe this ten program course to be one of the best learning aids currently available on any microcomputer. The five MAT programs are designed to teach matrix algebra as far as the inverse in linear equations. Following on from this are the five MULT programs which interactively explore Matrix multiplication. Outstanding value.

MOVING AVERAGE £5 Explains and demonstrates the calculation and principles of moving average analysis. Allows you to calculate your own moving average analyses.

PHOTOPACK £6 Those interested in photography will enjoy this detailed study which supplements the Photography Tutorial. The DEPTH OF FIELD program is used to determine Depth of Field or Hyperfocal distance for any focal length lens used in still or cine photography. This is preceded by a well written tutorial covering the circle of confusion, aperture setting, focal length, film gauge, distance and degree of magnification in relation to depth of field. There is an additional section on zoom lenses. PHOTOFORM incorporates eight of the most useful photographic formulae in a single program, offering menu selection of Filter Factors, ASA/DIN tables, Processing Time Correction, Colour Printing Exposure, Magnification using belows or tubes, extension required for magnification, Depth of Field and Hyperfocal Distance. Now you can leave the calculations to PET while you take the pictures.

PHOTOGRAPHY TUTOR £10 A comprehensive course developed by a professional photographer making full use of PETs dynamic graphics capabilities to demonstrate and explain the mysteries of exposure, focus, aperture, shutter speeds, interchangeable lenses, depth of field, etc. The theory and practice of photography are explored interactively, and progress tested. Multiprogram pack. Disk version £10.

PHYSICS MULTIPLE CHOICE £7 Clearly written program which tests and scores knowledge of electricity, Amps, Ohms, Volts, Galvanometers, Lenses, refraction of light, colours, magnetism, velocity, Newtons, Pulleys, measurement of humidity, convection, pendula, cathode rays, etc.

SPEED READING £5 A set of programs to assist your reading rate whilst still maintaining word comprehension. Can display word sets at up to 3,600 words/minute. Full instructions are included. There is a built in 45 seconds time delay between tests to avoid eye strain

STATISTICAL DISTRIBUTION PACK £7 Contents include Correlation-Coefficient, Chi-squared distribution for tail-end and percentile, and the following distribution functions: Poisson, Gaussian, positive and negative binomial. All results to 9 digits. Protection against null returns.

STATISTICS £7 Gives mean, SE for up to 200 numbers. Stores statistics for up to 50 groups for T-Test comparison, with probability level calculated at any time. Statistics may be stored on cassette and retrieved later. Full editing with transparent set of 10 control characters. Full error detection checks.

TALKING ABOUT SEX £12 It has been estimated that sexual problems are causing marital difficulties in half the marriages in the U.K. And that 70% of these people can overcome their sex problems simply by getting correct information on sexual matters. But even for those who are not experiencing problems, there is always room for the improvement that comes with knowledge. Talking About Sex is mainly a panel discussion with two of Canada's foremost sex counsellors, Dr William Chernenkoff and his wife and co-therapist, Carolyn Chernenkoff. The path to satisfactory sex begins with knowledge and the appropriate attitude. This program will show you how to make knowledge and attitude work for you, not against you. Inhibitions are often simple misunderstandings, and your improved understanding of sexuality is here in this course. An excellent sex education tool for teachers, too.

THE STARS & THE PLANETS £5 A fascinating introduction to The Stars by Adrian Berry, best selling author and science correspondent of the Daily Telegraph. How many stars are there? How far away is the nearest star? The answers are all here. The Planets explores the moons, asteroids and planets of the solar system. Well, how much would you weigh on Mars?

TIME PACK £20 Well formatted package developed by Dr David J. Wright. Contains EXPSMOOTHING to perform single and double exponential smoothing on a time scene of observations X^1, X^2, X^3, . . . HOLT'S METHOD on a time series of observations X^1, X^2, X^3, . . . SEASONALITY performs a seasonality analysis on time series data, X. It offers a choice between an additive model: X=T+S+e and a multiplicative one: X=TSe, where T is the trend, S is the seasonal index and e is a random disturbance. BOXJ MODELS calculates the autocorrelation coefficients of a time series X^1, X^2, X^3 . . . and uses them in a preliminary estimation stage of some Box-Jenkins models. A one step ahead forecast is produced together with 95% confidence limits.

YOUR BLOOD PRESSURE £12 High blood pressure has no obvious symptoms, but very high risks. High pressure is very common as people get older, or among people in high-pressure situations. This VitaFacts program tells all about your heart and circulatory system. What blood pressure is, what is high, what is low, and what it all means to you. Causes and effects, diagnosis and treatment, risk factors and prevention are discussed. The various roles of sleep, diet and the increasing incidence of hypertension in women is presented. No one is immune to high blood pressure, so knowledge and prevention are your best defenses.

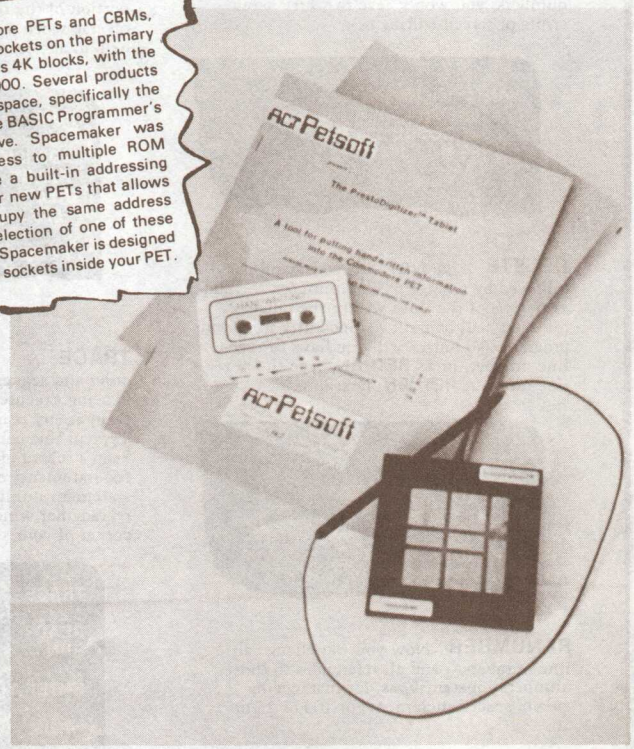
BEAM ANALYSIS £20 Specially developed by a chartered engineer this program uses the Macauley Beam Analysis to calculate the Bending Moment, Slope and Deflection of a Simply Supported Continuous Beam. The Beam may be subjected to any combination and number of Point Loads, Distributed Loads, and for External Moments. Any compatible system of units may be used. The results are presented in the Load units of the input Loads and the Length units are those of the SPAN.

SUPPLIES

Petsoft Certified Cassettes Specially manufactured for us in C-12 lengths, which will accept approximately three 6K programs per side. We use a tape which enjoys low dropoff characteristics, and a high quality shell. These are the cassettes we use. Library boxes included. £4.75 for 10 £22.50 for 50 £44 for 100.

PET DISKETTES £35 for 10 (+50p p&p) Floppy disks suitable for PET drives. Disks only available in boxes of 10.

SPACEMAKER £25 In the new Commodore PETs and CBMs, ROM expansion area is available in empty sockets on the primary logic board. These sockets are addressed as 4K blocks, with the leftmost empty socket having address $B000. Several products currently on the market use this address space, specifically the Commodore Word Processing Packages, the BASIC Programmer's Toolkit, and the Computhink Disk Drive. Spacemaker was developed to allow the user easy access to multiple ROM configuration . . . even when they have a built-in addressing conflict. Spacemaker is a utility device for new PETs that allows user selection between ROMs that occupy the same address space, and additional circuitry to allow selection of one of these ROMs under program or manual control. Spacemaker is designed so you can install one in each of the spare sockets inside your PET.



PRESTO DIGITIZER £42 Hand written input for your PET

Isn't it about time the computer adapted to you? The Presto Digitizer tablet lets the PET learn to recognise your printing style. Once you 'teach' the computer your handwriting you can save your stroke set on tape for later use.

Our recognition software is so fast Zorro wouldn't be able to get ahead of it! Print a letter and–Presto!–it appears in a string variable, ready to print, display or use in your programs. Yet the learning and recognition algorithms take up only about 2K bytes of RAM.

By now you will have found that most nifty peripherals cost £250 and up. How's this for a refreshing change: the Presto Digitizer completely assembled and tested, ready to plug right into the user port, plus a cassette with complete software start up, and full documentation including detailed instructions for writing your own programs for this tablet–the whole works will cost you only £42 plus VAT.

That's right–less than £50 for a device that is so unique and useful we could easily charge more. At this price anyone can now have the ability to communicate with the PET in a mode we all know–hand writing. So let the computer adapt. After all you are the boss!

TALKING CALCULATOR £10

PET SPEAKS! Just load the program, plug in a user port sound generator* and listen as the Talking Calculator not only prints but speaks the answers to the problems you key in. A calculator is shown on the screen display. To divide six by four, simply press '6', '/', '4' and '=' keys. PET will respond audibly with: "Six . . divided . . by . . four . . equals . . one . . point . . five". Progress is also tracked on the screen display.

*User Port Sound Generator available at £27.

PETSOFT PROGRAMMER'S TOOLKIT

–for PET owners who want more fun and fewer errors with their programming.

The Toolkit is a machine language program which is provided in a 2 kilobyte ROM chip. Just plug it in –no tools are necessary–and your PET's BASIC has 10 new and very useful commands.

AUTO This command is followed by a series of optional parameters specifying where you want to enter lines and how far apart you want them. Your PET will automatically respond with a line number prompt. You won't have to enter the line numbers; you won't have to worry about errors of screen editing.

```
AUTO 100,25
  100 FOR I = 1 TO 10
  125 GOSUB 300
  150 ■
```

DELETE Like **LIST**, this command is followed by a range of line numbers . . . and every one of the lines within the range of numbers will be removed instantly from your program. No longer will you have to type a line number, press **RETURN**, type the next line number, **RETURN**, next line. . . .

```
DELETE 200-350

READY.
LIST 200-350

READY.
```

RENUMBER Now you can change all line numbers— and all references to those numbers—instantly, as, for instance by evenly spaced increments of 100 or 25 or 10. . . .

```
LIST

  10 GOSUB 99
  15 PRINT I
  16 GOTO 10
  99 INPUT J
 100 IF J = 0 THEN END
 200 I = SQR(J):RETURN
READY

RENUMBER 100,10

READY.
LIST

 100 GOSUB 130
 110 PRINT I
 120 GOTO 100
 130 INPUT J
 140 IF J = 0 THEN END
 150 I = SQR(J):RETURN
READY.
```

HELP How many times have you wanted to scream "HELP!" when your PET couldn't interpret your program and all it would say was: **?SYNTAX ERROR**? Fret no longer: Now just type in **HELP**. The line on which the error occurs will be shown and the erroneous portion of the line will be indicated in reverse video on the screen. Truly a great help in any learning or school situation.

```
RUN

?DIVISION BY ZERO ERROR IN 500
READY.
HELP
  500 J = SQR(A*B/C)

READY
```

TRACE Now you can see precisely the order and sequence in which your program is being executed. You can also stop the program at any point and record the sequence. Type in this command and your PET will keep a record of the line numbers of the last six statements executed. These last six statement numbers will appear in a small rectangular window in the upper right hand corner of your screen.

```
TRACE                          #100
                               #110
READY.                         #150
RUN                            #160
                               #175
ENTER YOUR NAME? JIM           #200

HI JIM.

HOW OLD ARE YOU?
```

STEP Again your line numbers are displayed in the upper right hand corner of the screen in this version of **TRACE**. But now your PET executes just one statement and pauses until you press **SHIFT**. Then it proceeds to the next statement.

OFF This command will stop either **TRACE** or **STEP**.

APPEND You've already worked hard to develop a number of programs and, of course, you've saved them on tape. You're working on a program that's now in memory. Just type in **APPEND** "*program name*" and all statements in that program will now follow the program in memory. No need to retype; no opportunity for errors. Save any set of statements or subroutines onto a tape, using the normal **SAVE** command; then recall them with the **APPEND** command and add them permanently to your program.

```
APPEND "INPUT"

PRESS PLAY ON TAPE #1
OK

SEARCHING FOR INPUT
FOUND INPUT
APPENDING

READY.
```

DUMP During or after running a program, this command will display the names and values of all variables used in the execution of your program. You'll know at once what simple variables, arrays and strings you've used and what values you've assigned to each.

```
RUN

READY.
DUMP
A1 =  10
BW = – 6.1
C$ = "HI"
READY.
```

FIND Like **LIST**, this command will show a set of lines. But the FIND command is followed by specifying a character string. Those lines, and only those lines, containing a desired character string will be listed on you PET's screen. If you were to type **FIND A$, 100-500** your PET's screen would display all lines between line numbers 100 and 500 that contain **A$**.

```
FIND A$,100 – 200
  110 A$ = "HELD" + B$
  180 B$ = MID(A$,I,12)
  200 INPUT A$

READY.
```

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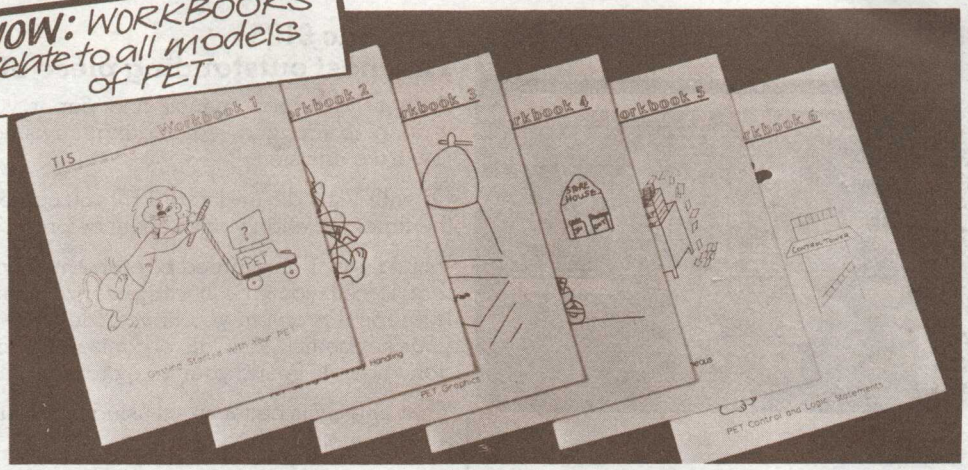

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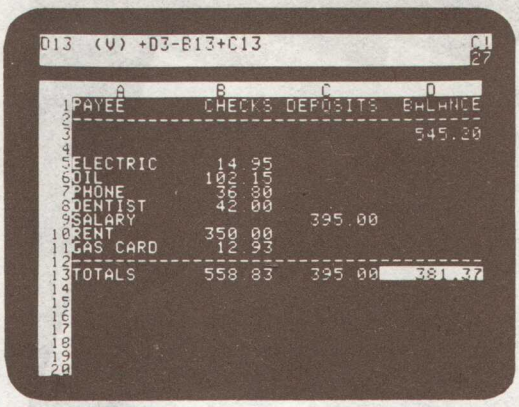

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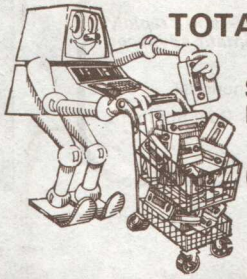

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